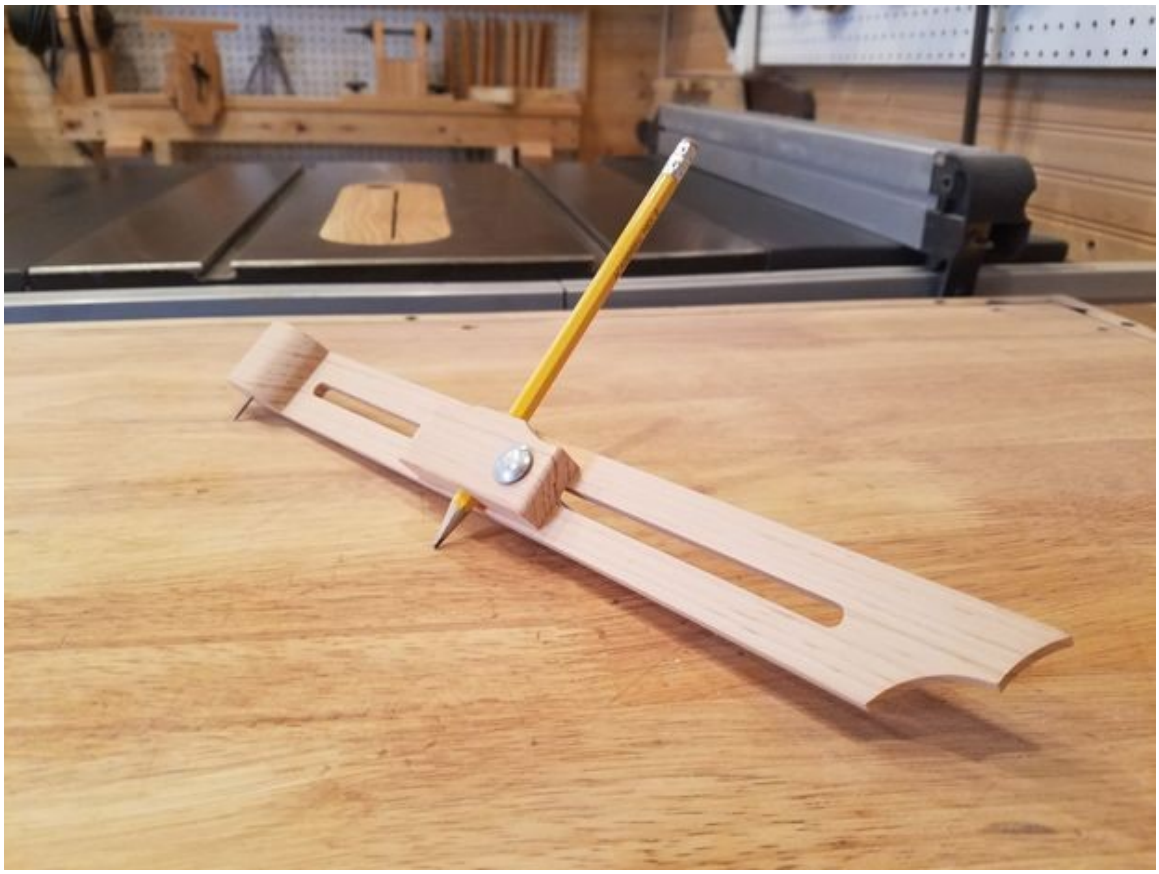
Trammel



Step 1:

https://www.youtube.com/watch?v=6KAr4XrciyU&feature=youtu.be
I always suggest watching the build video so that you have a better understanding of the build process.

Step 2: Building the trammel

For this project I used a 1 inch by 3 inch scrap of pine I had.

At my router table I created a ten inch long slot by making a series of cuts with a 1/4 inch straight bit, raising my bit in between each cut until I was all of the way through.

At ten inches this will give me a radius of twenty inches, which will be more than sufficient for my needs. But you can make this slot as big or as small as your needs require, just remember this slot is half of the overall size of this trammel. So if you choose a five inch slot your trammel will create a ten inch diameter circle.

Step 3:

With my slot created, I was able to cut the trammel to size. The measurement of this was not important to me, my idea was to make sure the slot was centered after I was done.

The final measurements ended up to were I had half of an inch of material to each side of the slot.

Step 4:

Then using my band saw I cut the trammel to a final thickness of a 1/4 of an inch, saving the cut off.

This cut stops short from one end by one and a half inches to allow there to be material for the pin of the trammel.

Step 5:

The final step for the body was sanding and shaping,

The end of this that will receive the pin I rounded over.

Step 6:

The adjustment for the trammel I made from the cut off that was created at the band saw. This piece requires 3 holes to be drilled with a 1/4 of an inch drill bit. The first hole will be to except the pencil and is drilled all of the way through from end to end. The second hole is for a retainer bolt and is drilled all of the way through the side about 1/2 of an inch from the first hole drilled. The third hole is for an alignment dowel and is drilled directly in line with the second hole but is 1/2 of an inch to the opposite side of the first hole. Note, this hole does not go all of the way through it only goes in about a 1/4 of an inch.

Step 7:

With my holes drilled I used my band saw to make one cut center of this piece stopping at the hole I drilled for the pencil.

This will allow the assembly to tighten down to hold the pencil.

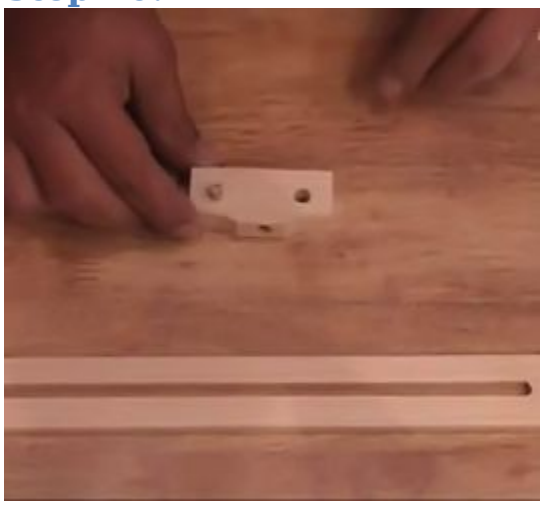
Step 8:

I cut the assembly to a length of 2 1/2 inches using my table saw sled, then cleaned it up at the belt sander.

Step 9: Assembling the trammel

For the pin of the trammel I used a brad nail. First drilling a hole that would allow for a snug fit, I then cut the head off of the nail and inserted it in to the hole using C.A. glue

Step 10:



In the hole that was drilled a 1/4 of an inch deep I glued in a dowel, This dowel should be about a 1/4 of an inch proud of the surface.

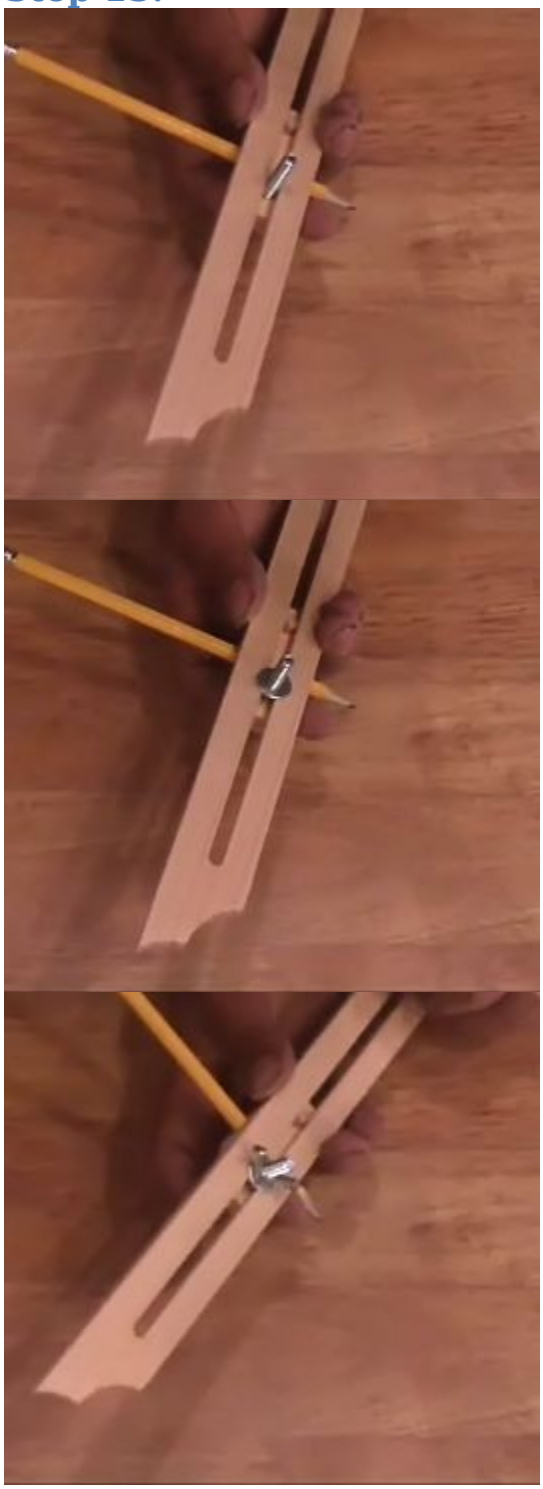
Step 11:

Then insert a pencil as shown..

Step 12:

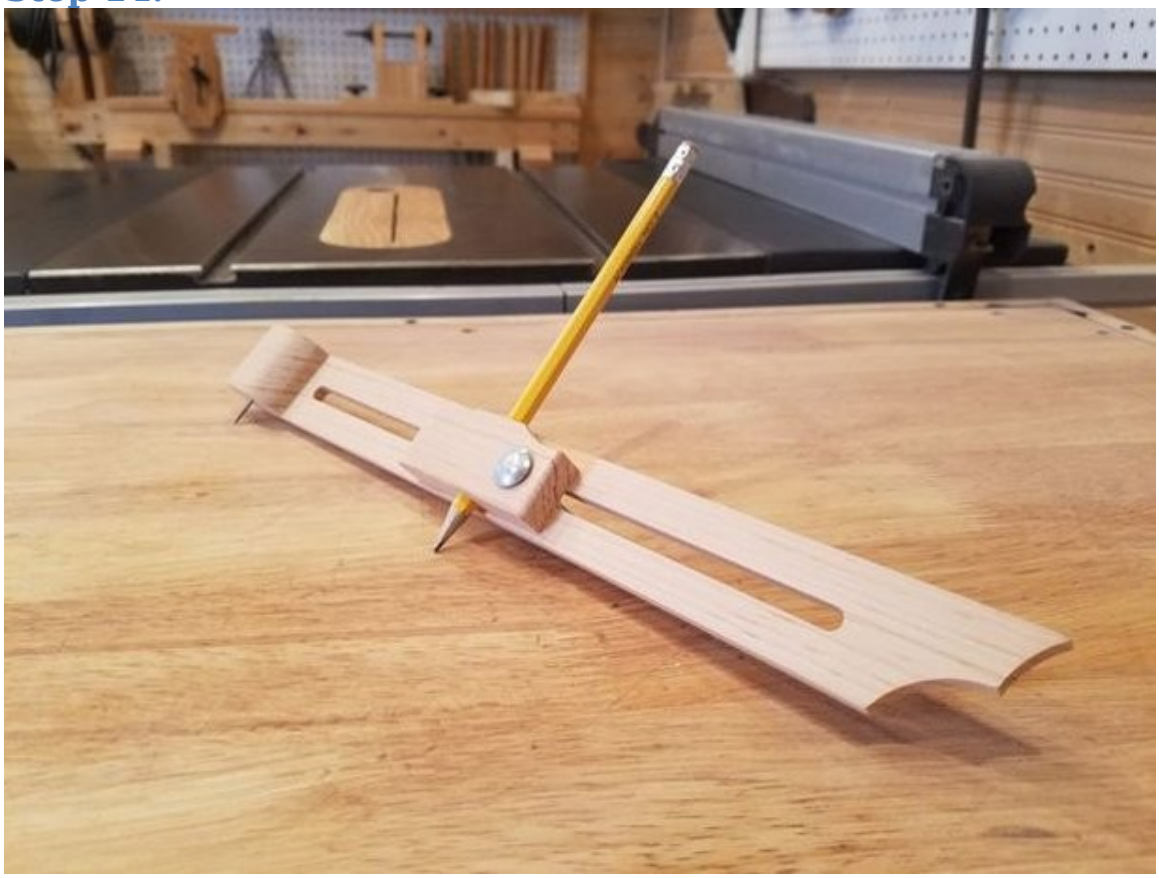
Next a carriage bolt is installed into the remaining hole.

Step 13:



This assembly can then be placed into the main body of the trammel lining up both the dowel and the carriage bolt with the slot.Then a washer and a wing nut can be installed on to the carriage bolt.

Step 14:



To use the trammel just mark the center of your circle and place the pin of the trammel on your mark, then loosen the wing nut and adjust to desired diameter then tighten the wing nut and draw your circle.